

12.3.86

# LONGVIEW FIBRE COMPANY

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1-206-425-1550



December 8, 1989

Ms. Barbara J. Trejo  
Washington Department of Ecology  
4350 150th Avenue NE  
Redmond, WA 98052-5301

Dear Ms. Trejo:

Longview Fibre, Ecology, and CH<sub>2</sub>M Hill met on October 30, 1989, to discuss the preliminary results of the most recent subsurface investigation at the Longview Fibre Seattle plant. At the close of this meeting it was agreed that the following additional data would be obtained:

1. Since test pits N20, S20, and S30 did not show floating oil, these pits would be back-filled with clean material.
2. The remaining four test pits would be left open for observation and recovery of additional oil, for a period of approximately two weeks.
3. The high total petroleum hydrocarbon values (analyzed by Method 418.1) for soil samples collected during the test pit work would be re-tested by an alternate procedure (Method 8015), to assess potential interference of biogenic hydrocarbon sources on the test.

Test pits N20, S20, and S30 (Figure 1) were back-filled on November 1, 1989, with clean soils removed during the test pit excavation (piles A and D on Figure 1), supplemented by imported clean fill. Oil observations and recovery, which were initiated immediately after the test pits were dug, continued through November 30, 1989. Soil samples from the initial test pit work that exhibited high TPH values were analyzed by the Method 8015 procedure. This letter summarizes the results of the additional data collection activities and recommendations for future site investigation activities.

## Subsurface Oil Occurrence and Recovery

The sequence of test pit excavation and subsurface oil observations was described at the October 30 meeting, to illustrate the declining trend in oil thicknesses observed in monitoring well MW-3 and in the test pits. Oil observation and recovery from the dates of test pit excavation through the last date of data collection are summarized in Table 1. The locations of the test pits and MW-3 are shown on Figure 1.



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The observations of thin oil layers and scattered oil globules in the test pits indicate that the extent of subsurface oil from the former heating oil tank is locally restricted to within about 20 feet of well MW-3, where measurable thicknesses of oil have been consistently measured in the past. The initial sudden appearance of oil in test pit W10 and the concurrent decline of oil thickness in well MW-3 are additional indications of the limited extent of subsurface oil in the vicinity of well MW-3.

Oil observations summarized in Table 1 show a general decreasing trend in the amount of oil present in well MW-3 and in the four remaining test pits. Measurable oil layers initially reported at the beginning of the test pit program declined over time to scattered globules of oil or oil sheens. This declining oil presence is also evident from the total oil volumes recovered from each of the four test pits (Table 1), which were accumulated by pumping from each test pit into dedicated 55-gallon drums and decanting off the oil-free water. Total additional oil recovered since the beginning of the test pit program is estimated at 3.0 gallons.

#### Additional TPH Testing of Soil Samples

Soil samples initially collected during the test pit program, and subsequently tested for TPH by Method 418.1, were retained in iced coolers by CH<sub>2</sub>M Hill. In accordance with the results of the October 30 meeting with Ecology, selected soil samples were submitted for analysis of TPH by Method 8015, to determine if the initial high TPH values might be the result of interference from non-petroleum, biogenic hydrocarbons (such as natural wood components). The sample extraction and analysis process of Method 8015 eliminates interferences from biogenic hydrocarbons. The results of the TPH testing of soil samples by the two methods are summarized in Table 2. Laboratory reports for all samples appearing in Table 2 are included as an attachment to this letter.

As shown in Table 2, the Method 418.1 data exceed the Method 8015 data by significant factors (ranging from about 6 to 300). On the basis of these results, discussions with the laboratory, and observations of wood debris (timbers, logs, pilings, etc.) in the test pits, we have concluded that the original TPH tests were influenced by biogenic materials that resulted in erroneously high values. The TPH values from the Method 8105 testing are all less than the 200 ppm soil cleanup criteria of Ecology (August 1, 1988, Policies and Procedures for Underground Storage Tank Removal).

The Method 8015 data were also utilized to determine the disposal options for the contaminated soil piles from the test pit work at the site (piles B and C on Figure 1). On the basis of this data, the contaminated soil piles were transported by a contractor and disposed of at the Coal Creek Landfill on November 30, 1989.

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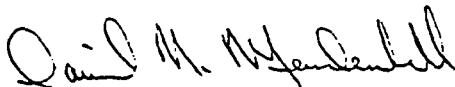
Future Site Investigation Activities

On the basis of the project data presented in this letter, Longview Fibre plans to conduct the following activities to complete the Seattle plant site investigation:

1. The remaining four test pits (N10, S10, W10, and W20) will be back-filled with clean soil and the pavement will be replaced on December 15, 1989. As discussed with you during a recent telephone conversation, the Longview Fibre lease on the property on which the test pits are situated expires at the end of this month, and Longview Fibre will lose access at that time. The timely closure of the test pits is therefore critical.
2. Site investigation data collected since May 1989 (sampling of the three on-site monitoring wells, evaluation and testing of well MW-2, and the test pit program) will be summarized in a report by CH2M Hill. This report will be submitted to Ecology in early January 1989.
3. Longview Fibre will meet with Ecology in late January 1990 to discuss the report and the final disposition of the Seattle plant site investigation.

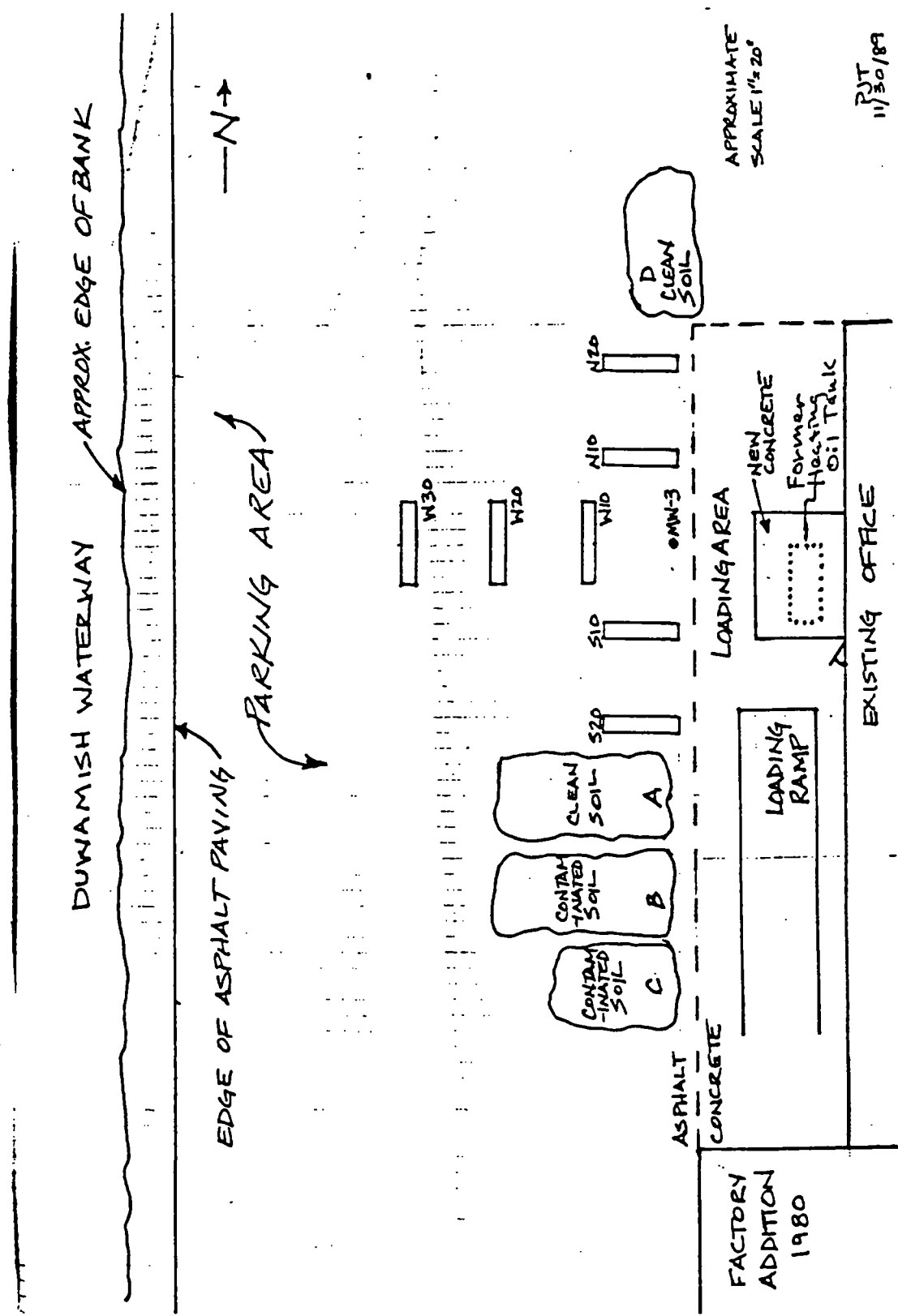
Please call if you have questions.

Sincerely,



David N. Mendenhall  
Water Quality Engineer

DNM:eh  
Enclosures



LONGVIEW FIBRE COMPANY - SEATTLE BOX PLANT

Figure 1

**Table 1**  
**SUMMARY OF OIL OBSERVATIONS AND RECOVERY IN**  
**TEST PITS AND MONITORING WELL MW-3**

<u>Date</u>	<u>Time</u>	<u>Well MW-3<sup>1</sup></u>	<u>Pit W10</u>	<u>Pit N10</u>	<u>Pit S10</u>	<u>Pit W20</u>
10/20/90	0945	OT = 1.8 <sup>1</sup>	--	--	--	--
10/20/89	--	--	Start pit @0955	Start pit @1045	Start pit @0740	Start pit @1240
10/20/89	1015	--	Oil "gush in pit; PT = 1/8- 1/4"	--	--	--
10/20/89	1345	OT = 0.7'	--	--	--	--
10/20/89	1420	OT = 0.6'	--	--	--	--
10/20/89	by end of day	--	thin oil layer; skim w/ pump	--	--	--
10/21/89	--	--	thin oil layer; skim w/ pump	thin oil layer; skim w/ pump	thin oil layer; skim w/ pump	--
10/23/89	1130	OT = 0.15'	--	--	--	--
10/23/89	--	--	thin oil layer; skim w/ pump	oil globules; skim w/ pump	oil globules; skim w/ pump	oil globules; skim w/ pump
10/25/89	--	--	oil globules; skim w /pump	oil globules; skim w/ pump	oil globules; skim w/ pump	oil globules; skim w/ pump
10/27/89	0933	OT = 0.02'	oil globules	oil globules	oil globules	oil sheen
11/07/89	--	--	oil globules skim w/ pump	oil globules skim w/ pump	oil globules skim w/ pump	trace oil globules; skim w/ pump

**Table 1  
Continued**

<u>Date</u>	<u>Time</u>	<u>Well MW-3<sup>1</sup></u>	<u>Pit W10</u>	<u>Pit N10</u>	<u>Pit S10</u>	<u>Pit W20</u>
11/17/89	--	oil sheen in bailer	oil sheen; skim w/ pump	oil globules; skim w/ pump	oil globules; skim w/ pump	trace oil globules; skim w/ pump
11/27/89	--	OT = 1/8" in bailer	trace oil globules; skim w/ pads	oil sheen; skim w/ pads	trace oil globules; skim w/ pads	trace oil globules; skim w/ pads
11/30/89	--	oil sheen in bailer	trace oil globules; skim w/ pump	oil sheen; skim w/ pump	trace oil globules; skim w/ pump	trace oil globules; skim w/ pump
Total Oil Recovered		--	0.4 gal.	1.5 gal.	1.1 gal.	thin layer (not measurable)

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<sup>1</sup>OT = Oil thickness.

**Table 2**  
**SUMMARY OF TOTAL PETROLEUM**  
**HYDROCARBON RESULTS FOR SOIL SAMPLES**

<u>Sample Designation</u>	<u>Data Collected</u>	<u>Sample Origin<sup>1</sup></u>	<u>TPH<sup>2</sup>, Method 418.1 (IR), mg/kg</u>	<u>TPH<sup>2</sup>, Modified Method 8015 (GC), mg/kg</u>
Clean Composite #1	10/20/89	Clean soil pile A	8.0J	---
Clean Composite #2	10/20/89	Duplicate of above sample	5.0J	---
HNU Composite #1	10/20/89	Contaminated soil pile B	4,280	---
HNU Composite #2	10/20/89	Duplicate of above sample	5,970	90
N10	10/20/89	Test pit N10	283	50
S10	10/20/89	Test pit S10	1,810	100
W10	10/20/89	Test pit W10	216	10
W20 Above Clay	10/20/89	Test pit W20, soil above clay layer	6,920	160
W20 Clay	10/20/89	Test pit W20, sample of clay layer	5.8J	---
HNU >5 #2	10/23/89	Contaminated soil pile C	2,340	100
HNU <5 #2	10/23/89	Clean soil pile D	40.4	---
N20	10/23/89	Test pit N20	5,980	75
S20	10/23/89	Test pit S20	28,500	90
W30	10/23/89	Test pit W30	1,600	170

<sup>1</sup>See site map with test pit and soil pile locations.

<sup>2</sup>Total Petroleum Hydrocarbons.